In the Claims:

1-11. (cancelled)

12. (new) A package for use in semiconductor devices, said package having a plurality of metallic terminals exposed on a package surface, comprising:
a metallic bump attached to a terminal; and
a first polymeric material covering said package surface and surrounding the bump to form a solid meniscus.

13. (new) The package according to Claim 12, further comprising a second polymeric material used in semiconductor encapsulation, including molding compounds as well thermoset and thermoplastic formulations.

14. (new) The package according to Claim 12 wherein said semiconductor devices include ball-grid array devices and chip-scale package devices.

15. (new) The package according to Claim 12 wherein said metallic bump further comprises reflowable metal selected from a group consisting of tin, indium, tin alloys including tin/indium, tin/silver, tin/bismuth, and tin/lead, conductive adhesives, and z-axis conductive materials.

16. (new) The package according to Claim 12 wherein said bump has a diameter between about 50 and 700 μm and a center-to-center spacing between about 100 and 1300 μm.

17. (new) The package according to Claim 12 wherein said first polymeric material includes non-electrically conductive adhesives, epoxies filled with inorganic particulate fillers including boron nitride or aluminum nitride, bisphenol A with an anhydride cross-linking agent, having a viscosity lower than 8000 cps and an elasticity modulus between about 1 and 5 GPa.

18. (new) A substrate for use in electronic assembly board, said substrate having a metallic terminal exposed on a substrate surface, comprising:

a metallic bump attached to a terminal; and

a first polymeric material covering a portion of the substrate surface and surrounding the bump to form a solid meniscus.

19. (new) The substrate according to Claim 18 further comprising material selected from a group consisting of organic materials, including FR-4, FR-5, and BT resin, with strengthening or thermally modulating fibers or fillers, including a grid of glass fibers.

20. (new) A method for completing a package for use in semiconductor devices, comprising the steps of:

providing a package having a metallic terminal exposed on a package surface with a metallic bump attached to said terminal;

applying a first polymeric material to the top surface of said bump and the package surface near the bump;

exposing said surface to a plasma to

- roughen said polymer surface;
- clean said polymer surface from organic contamination; and
- improve the surface affinity to adhesion;

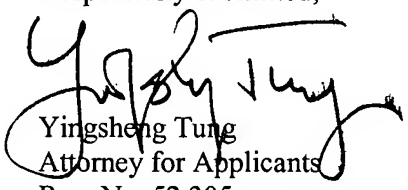
applying a polymeric precursor around said bump, to form a meniscus on said bump and to cover the space near the bump;

curing and solidifying said polymeric precursor.

21. (new) The method according to Claim 20 wherein said first polymeric material is polyvinyl alcohol.

22. (new) The method according to Claim 20 further comprising the process step of slightly polishing said bump surfaces and a step of washing to remove excess first polymeric material.

Respectfully submitted,



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